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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* ERNING XIA and ZHENZE HU

Appellants

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Appeal 2009-010233  
Application 10/725,159  
Technology Center 1600

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Decided: March 22, 2010

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Before SALLY GARDNER LANE, RICHARD E. SCHAFER, and  
MICHAEL P. TIERNEY, *Administrative Patent Judges*.

LANE, *Administrative Patent Judge*.

DECISION ON APPEAL

## I. STATEMENT OF THE CASE

The appeal, under 35 U.S.C. § 134, is from a Final Rejection of claims 4, 7, 9-12, 20, and 21. Appellants canceled claims 1-3, 5, 6, 8, and 13-19. (App. Br. 2). We have jurisdiction under 35 U.S.C. § 6(b). We affirm.

Appellants' specification relates to preservative systems for contact lenses and other medical devices that contain saccharides and cationic polysaccharides. (Spec. ¶¶ [0001] and [0002]).

The real party-in-interest is said to be Bausch & Lomb, Inc. (App. Br. 1).

The Examiner relied on the following patent documents:

<u>Name</u>	<u>Number</u>	<u>Date</u>	<u>Abbreviation</u>
Sugiura	5,928,606	July 27, 1999	Sugiura '606
Hu et al.	6,274,133	August 14, 2001	Hu '133
Park et al.	6,916,958	July 12, 2005	Park '958

Appellants appeal the rejection of claims 4, 7, 9-12, 20, and 21 under 35 U.S.C. § 103(a) over Hu '133 and Sugiura '606. Appellants did not argue for the separate patentability of any of the claims within the rejection. We focus on claim 20 in our review. *See* 37 C.F.R. § 41.37(c)(vii).

## II. FINDINGS OF FACT

1. Appellants' claim 20 recites<sup>1</sup>:

A method of imparting a preservative efficacy to a contact lens solution, the method comprising: providing in said contact lens solution a preserving agent that comprises

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<sup>1</sup> Claim 20 has been modified by adding an indentation. *See* 37 C.F.R. § 1.75(i).

one or more saccharides selected from the group  
consisting of glucose and  $\alpha$ -methyl  
glucopyranoside in their D or L forms in  
combination with  
one or more polyquaternium-10 cationic polysaccharides,  
wherein the saccharides and cationic polysaccharides are in  
amounts effective for solution preservation.

(App. Br. 8, Claims App'x).

2. Hu '133 teaches solutions for treating contact lenses that comprise a cationic cellulosic polymer, a tonicity agent, a buffering agent, and a demulcent (wetting agent). (Hu '133 col. 13, l. 45, through col. 14, l. 8 (claims 1 and 4), *see also* Hu '133 col. 5, ll. 6-10, and col. 7, ll. 1-5).
3. Hu '133 teaches that a suitable cationic cellulosic material is a polyquaternium-10 cationic cellulosic polymer. (Hu '133 col. 5, ll. 27-44).
4. Hu '133 teaches that the wetting agent can be a mono- or disaccharide. (Hu '133 col. 14, ll. 9-12 (claim 5); *see also* Hu '133 col. 7, ll. 20-22).
5. Sugiura '606 teaches a wetting agent for use with contact lenses that includes glucose as a tonicity agent. (Sugiura '606 col. 10, ll. 36-60).
6. The examples in Appellants' specification report results from tests of "preservative efficacy" in relation to an "acceptance criteria," wherein the test solution must reduce the number of bacteria, yeast, and molds by specific, recited amounts within a specified time. (*See Spec.* ¶¶ [0029], [0031], [0033], [0035], [0037], [0039], and [0041]).
7. Appellants' specification provides that  
[a] preserving amount of one or more saccharides and one or more cationic polysaccharides is an amount that will at least partially reduce the microorganism population in the formations

employed. Preferably, a preserving amount is that which will reduce the microbial burden of representative bacteria by two log orders in four hours and more preferably by one log order in one hour. More preferably, a preserving amount is an amount that will eliminate the microbial burden on a contact lens when used according to its regimen for the recommended soaking time (FDA Chemical Disinfection Efficacy Test – July 1985 contact Lens Solution Draft Guidelines).

(See Spec. ¶ [0042]).

### III. ISSUE

Would those of skill in the art have found it obvious to make a contact lens solution comprising glucose and a polyquaternium-10 cationic polysaccharide, in amounts that inhibit microorganism growth to some extent?

### IV. ANALYSIS

Appellants' claim 20 is drawn to a method of using a contact lens solution, wherein the solution includes: (1) a saccharide selected from glucose or  $\alpha$ -methyl glucopyranoside and (2) a polyquaternium-10 cationic polysaccharide. These components are present in "amounts effective for solution preservation." (FF 1).

Hu '133 provides solutions for treating contact lenses that comprise a cationic cellulosic polymer and a wetting agent, among other ingredients. (FF 2; Hu '133 col. 13, l. 45, through col. 14, l. 8 (claims 1 and 4)). The cationic cellulosic polymers taught in Hu '133 include polyquaternium-10 cationic cellulosic polymers. (FF 3; Hu '133 col. 5, ll. 27-44). Hu '133 also teaches that the wetting agent can be a mono- or disaccharide. (FF 4; Hu '133 col. 14, ll. 9-12 (claim 5)).

Sugiura ‘606 teaches a wetting agent for use with contact lenses that includes glucose. (FF 5; Sugiura ‘606 col. 10, ll. 36-60).

Appellants argue that there would have been no reason to combine these teachings to impart a preserving efficacy to a contact lens solution. However,

[i]n determining whether the subject matter of a patent claim is obvious, neither the particular motivation nor the avowed purpose of the [claims] controls. . . . Under the correct analysis, any need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed.

*KSR Int’l v. Teleflex Inc.*, 550 U.S. 398, 419-20 (2007). We agree with the Examiner that because Sugiura ‘606 provides a specific component of the wetting agent, which falls within the genus taught by Hu ‘133, there would have been a reason to combine the reference teachings, even if it is not the reason put forth in Appellants’ claim.

Appellants make several arguments based on the use of the solution as recited in claim 20 – as a preservative. According to Appellants, they “proceeded against conventional wisdom” and realized that ingredients previously thought to encourage microorganism growth could be used as preservatives. (App. Br. 6-7). They argue that those in the art would not have had a reasonable expectation of success in combining these compounds to act as a preservative. (App. Br. 6-7).

The steps of the claimed method are found in the prior art. Both Hu ‘133 and Sugiura ‘606 teach exposing contact lenses to solutions that include the claimed components. Thus, we do not find the preamble of “imparting preservative efficacy” to be limiting. *See Bristol-Myers Squibb*

*Co. v. Ben Venue Labs., Inc.*, 246 F.3d 1368, 1376 (Fed. Cir. 2001) (“the claimed process here is not directed to a new use, it is the same use, and it consists of the same steps as described by [the prior art]. Newly discovered results of known process directed to the same purpose are not patentable because such results are inherent.”); *see also In re Tomlinson*, 363 F.2d 928, 934 (CCPA 1966) (“As to the introductory language, ‘A process of inhibiting degradation of polypropylene caused by exposure to light,’ again we do not think these words can serve to patentably distinguish the claimed process from the prior art. That language in effect, states the *result* of admixing the two materials. While the references do not show a specific recognition of that result, its discovery by appellants is tantamount only to finding a property in the *old composition*, not in the nickel compound for which, it is argued, a new use has been found.”). Appellants have not persuaded us that those of skill in the art would not have had an expectation that the compounds recited in their claim would be useful in a contact lens solution.

Appellants also argue that neither Hu ‘133 nor Sugiura ‘606 teach that “the saccharides and cationic polysaccharides are in amounts effective for solution preservation,” as claimed. (App. Br. 4). Appellants assert that “preservative efficacy” is defined in paragraph 0029 of their specification. (Reply Br. 3). Paragraph 0029 discusses testing of “preservative efficacy” in regard to an “acceptance criteria” for reduction of microorganisms. (FF 6). The term “acceptance criteria” does not appear in Appellants’ claims. Furthermore, paragraph 0042 of Appellants’ specification defines a preserving amount of saccharide and cationic polysaccharide as “an amount that will at least partially reduce the microorganism population in the

formations employed.” (FF 7). Paragraph 0042 recites more specific “preferred” levels of reduction of microorganism, but “an applicant should [not] have limitations of the specifications read into a claim where no express statement of the limitation is included in the claim.” *In re Prater*, 415 F.2d 1393, 1396 (CCPA 1969). Given the broad scope of “a preserving amount” in paragraph 0042 and the lack of specific amounts or the term “acceptance criteria” recited in Appellants’ claims, we construe Appellants’ claims as encompassing any amount of saccharide or cationic polysaccharide that reduces the level of microorganisms. *See In re American Academy of Sci. Tech Center*, 367 F.3d 1359, 1364 (Fed. Cir. 2004) (“During examination, ‘claims ... are to be given their broadest reasonable interpretation consistent with the specification, and ... claim language should be read in light of the specification as it would be interpreted by one of ordinary skill in the art.’”).

Hu ‘133 teaches concentrations of wetting agent from 0.01 to 2.0% (Hu 133 col. 7, ll. 16-20), and cationic polysaccharide from 0.01 to 1.0 % (Hu ‘133 col. 5, ll. 6-8). Appellants’ specification provides that concentrations of saccharides from approximately 0.0001 to approximately 10.0 % (Spec. ¶ [0017]) and cationic polysaccharides from approximately 0.001 to approximately 1.0 % (Spec. ¶ [0020]) are useful in the claimed method. We find that the amounts of saccharide (glucose) and cationic polysaccharide taught in Hu ‘133 would reduce the level of microorganisms to some extent, according to Appellants’ specification. Thus, Hu ‘133 teaches “amounts effective for solution preservation.” Appellants’ have not provided evidence to persuade us otherwise.



Appellants also dispute that Sugiura '606 teaches saccharides are wetting agents, arguing instead that Sugiura teaches saccharides are tonicity agents. (App. Br. 5). Appellants assert that “[p]eople of ordinary skill in the art understand that tonicity agents are not generally or necessarily wetting agents” (App. Br. 5). Regardless, Sugiura '606 specifically teaches that glucose is known in the contact lens solution art as a suitable agent for use in combination with wetting agents. Thus, we are not persuaded that those of skill in the art would not have used glucose in combination with the wetting agent of Hu '133.

## V. CONCLUSION

Those of skill in the art have found it obvious to make a contact lens solution comprising glucose and a polyquaternium-10 cationic polysaccharide, in amounts that would inhibit microorganism growth to some extent. The Examiner did not err in finding that the claimed method of imparting a preservative efficacy to a contact lens would have been obvious under 35 U.S.C. § 103(a).

## VI. ORDER

Upon consideration of the record and for the reasons given, the Examiner's rejection of claims 4, 7, 9-12, 20, and 21 under 35 U.S.C. § 103(a) over Hu '133 and Sugiura '606 is AFFIRMED.

FURTHER ORDERED that no time period for taking any subsequent action in connection with the appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

Appeal 2009-010233  
Application 10/725,159

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Bausch & Lomb Incorporated  
One Bausch & Lomb Place  
Rochester, NY 14604-2701